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ABSTRACT

This paper sought to determine if there were significant differences between the opinions of university and school educators on the importance of selected generic professional knowledge objectives for preservice teachers. The survey instrument used was the Teacher Knowledge and Beliefs Inventory (TKBI) consisting of 60 items representing aspects of professional knowledge that might be emphasized in a teacher preparation program and 57 items representing beliefs that might be acquired. Respondents were 28 school of education faculty members and 36 teachers, central office personnel, principals, and curriculum specialists. The study focused on pedagogical topics: students, social context of schooling, curriculum, teachers, and teaching strategies and teaching. Some significant differences were found between the two groups. University educators considered knowledge about students, the social context of schooling, and curriculum as crucial slightly more than did school educators. School educators considered knowledge about teachers, and especially about teaching strategies, as more crucial. These and other findings are discussed, and references are included. (JD)

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PROFESSIONAL KNOWLEDGE OBJECTIVES FOR PRESERVICE TEACHERS AS DETERMINED BY SCHOOL AND UNIVERSITY TEACHER EDUCATORS

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PROFESSIONAL KNOWLEDGE OBJECTIVES FOR PRESERVICE TEACHERS AS DETERMINED BY SCHOOL AND UNIVERSITY TEACHER EDUCATORS

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One of the parameters suggested in a framework for research on teacher education programs is that of goals (Katz & Raths, 1985). The program goal parameter includes "variables such as the extent to which goals are explicit, realistic, shared, specific, coherent, compatible, thematic, technical, and humanistic" (Katz & Raths, 1985, p. 9). This study, of which only part is reported here (Schumacher, Esham & Bauer, 1985), investigated the extent to which generic preservice elementary teacher objectives selected by school and university teacher educators are common.

Teacher education programs frequently assume that program objectives selected by university professors are also highly valued by school administrators and teachers. Prior studies have used only university personnel to identify preservice teacher objectives (Byers & Freeman, 1983). This study was conducted in a project to develop a model of a collaborative teacher education program.[1]

Preservice teacher education is a collaborative effort by schools and universities to achieve a complex common goal: effective beginning teachers. Most teacher education programs have historically functioned as cooperative rather than collaborative efforts. A collaboration model differs from a cooperation model in beginning processes, communication, resources/ownership, requirements/characteristics, leadership/control and rewards (Hord, 1986). Collaboration implies a mutual interdependence, collegial in nature, to produce a comprehensive program which differs from prior cooperative arrangements (Lanier, 1983; Maeroff, 1983; Moloy, 1985; Lieberman, 1986). Further, the resulting comprehensive program is viewed as more effective than prior attempts by either institution. Collaboration suggests that each institution is willing to make internal institutional changes to attain the common goal of teacher effectiveness. Collaborative program development processes are ones of incremental decision-making rather than rationale, linear, or inductive decision-making (Schumacher, 1984). Because two institutions instead of one

are involved in a collaborative organizational change, the process takes longer (Intriligator, 1982). A set of common generic objectives for preservice teachers determined by school and university teacher educators appears essential to plan, develop and evaluate an internally consistent teacher education program (Darling-Hammond, Wise & Pease, 1983).

Program evaluation theorists and researchers (Stufflebeam, et al.,1971; Stufflebeam, 1983; Guba & Lincoln, 1981; Hord & Adams, 1981; Adams & Craig, 1983) suggest that it is necessary to periodically state program objectives which guide participants' thoughts, decisions and actions. Further, recent proposals by various groups (The Holmes Group, 1986; "The Carnegie Report", 1986) are multifaceted and frequently assume a concensus for a broad array of teacher education program goals and objectives. Without clearly delineating programatic objectives at each phase of teacher development from preservice though beginning teacher (Davis & Zaret, 1984), it is difficult to determine evaluation procedures and reasonable accountability for teacher education programs.

The following research questions are addressed in this paper:

1. Is there a significant difference between university and school educators' profiles of generic professional knowledge objectives for preservice teachers?
2. What are the <u>crucial</u> or <u>very important</u> collaborative knowledge objectives for preservice teachers using a 70% or more, a 60% or more, or a 50% or more measure? Which statements represent differences between the school and university preservice teacher objectives (discrepancy index)? Which statements are rated as <u>not important</u> preservice teacher objectives by both groups of teacher educators?

Design and Procedures

The Teacher Knowledge and Beliefs Inventory (TKBI) consisted of 60 items representing aspects of professional knowledge that might be emphasized in a teacher preparation program and 57 items representing beliefs that might be acquired. Both of these sections of the instrument were organized by Schwab's (1960) commonplaces of education: students, social context of schooling, curriculum, and teachers. A fifth category was added to each

section: knowledge of teaching strategies and beliefs about teaching. These commonplaces are called pedagogical topics of knowledge and beliefs in this paper. Below is a summary of the types and frequency of items in the TKBI.

Item-Form Types and Frequency for the
Teacher Knowledge and Beliefs Inventory

Pedagogical Topic	Knowledge	Beliefs
Students	12	12
Social Context of Schooling	13	12
Curriculum	12	13
Teachers	8	8
Teaching Strategies/Teaching	15	12
TOTAL	60	57

This paper presents the findings relating only to the pedagogical topics of teacher knowledge.

For the items which described specific topics of professional knowledge, respondents were asked to indicate "How important is it for participants in this program to acquire a substantial working knowledge of ...." on a scale of crucial, very important, important, somewhat important, and not important. Examples of knowledge items are:

--cognitive development (e.g. Piaget's stages)

--the influence of communities on schools and vice versa

--procedures for analyzing/evaluating curriculum materials

Respondents also could indicate that their interpretation of the programmatic goals did not provide sufficient information to respond.

The Virginia Commonwealth University TKBI was a revision of the Michigan State University College of Education Teacher Knowledge and Beliefs Inventory, an instrument which has been used at that institution for a number of years. The Collaborative Teacher Education Program Evaluation Committee reviewed the instrument and added four items to the knowledge section. These four items focused on the development of a reflective teacher, i.e. preservice teachers should know "ways of examining critically educational issues ...", "ways of examining one's own rationale for major curriculum decisions...", and "ways of examining one's own assumptions and biases about instruction and how these affect one's teaching strategies". Other items also could be interpreted as

reflective-oriented.

The respondents were 28 School of Education faculty self-identified as having taught a course in which elementary education students enrolled during the two preceding years. The 36 school respondents were teachers from a middle school, a model arts elementary school, a traditional elementary school, and the program planning committee (central office personnel, principals and curriculum specialists). The data were collected in spring, 1985.

Several tests of statistical significance were used in the data reduction and analyses. Multivariate profile analysis was used to compare the patterns of responses which identified crucial knowledge objectives. Analysis of variance and chi-square techniques were used to determine whether significant differences existed between the university and school respondents in the importance of each of the five pedagogical topics and each item which composed the crucial knowledge inventory.

Descriptive statistics were used to identify the collaborative generic professional knowledge statements. Statements were identified according to whether both groups of educators rated the statement as crucial or very important by more than 70%, by more than 60%, or by more than 50% of the group. If each group agreed to the extent indicated, the statement was considered a collaborative professional knowledge objective. In addition, knowledge statements rated as important by 50% or more of one group but less than 49% of the corresponding group were identified. This discrepancy index indicated those statements for which there were differences between the two educator groups in preservice teacher expectations. Statements rated as not important (less than 50% of each group rated statement as important) as preservice teacher objectives were also identified.

Profiles of Crucial Professional Knowledge Objectives

The mean percent of knowledge items rated crucial for each of the five topics representative of professional knowledge provides a comparison of school and university teacher educators' profiles of crucial professional knowledge for graduates. The profiles of crucial professional knowledge objectives of the two groups of teacher educators differ significantly ($p=.005$). As summarized in Table 1, the grand mean percent of items judged as crucial by university

Table 1

Mean Percent of Professional Knowledge Items Rated as "Crucial"

Pedagogical Topic	University Educators	School Educators
Students	28.0	28.4
Social Context	19.0	17.7
Curriculum	31.8	27.0
Teachers	16.5	22.6
Teaching Strategies	36.7	48.1
GRAND MEAN	27.4%	30.0%

educators is 27.4% and by school educators is 30.0%. The profiles of crucial knowledge portrayed in Figure 1 indicate which pedagogical topics are more crucial to each group of teacher educators. University educators consider knowledge about students, social context of schooling and curriculum as crucial slightly more than do school educators. School educators consider knowledge about teachers and especially about teaching strategies as crucial more than do university educators. The largest difference is the mean percent of crucial items relating to teaching strategies. University educators rate crucial 36.7% of the items and school educators rate crucial 48.1% of the items.

INSERT FIGURE 1

ABOUT HERE

It is interesting to note that of the 60 items representative of professional knowledge, the two groups of teacher educators differ significantly ($p<.05$) on only 12 items. Thus, the patterns of responses for the remaining items are similar for school and university teacher educators. There appears to be high concensus regarding the knowledge objectives for elementary preservice teachers.

A chi-square analysis identifies which statements are more crucial to each group of educators within a pedagogical topic. No significant differences are observed in the 12 items relating to knowledge of students. University educators consider more crucial 3 of the 13 items regarding knowledge of the

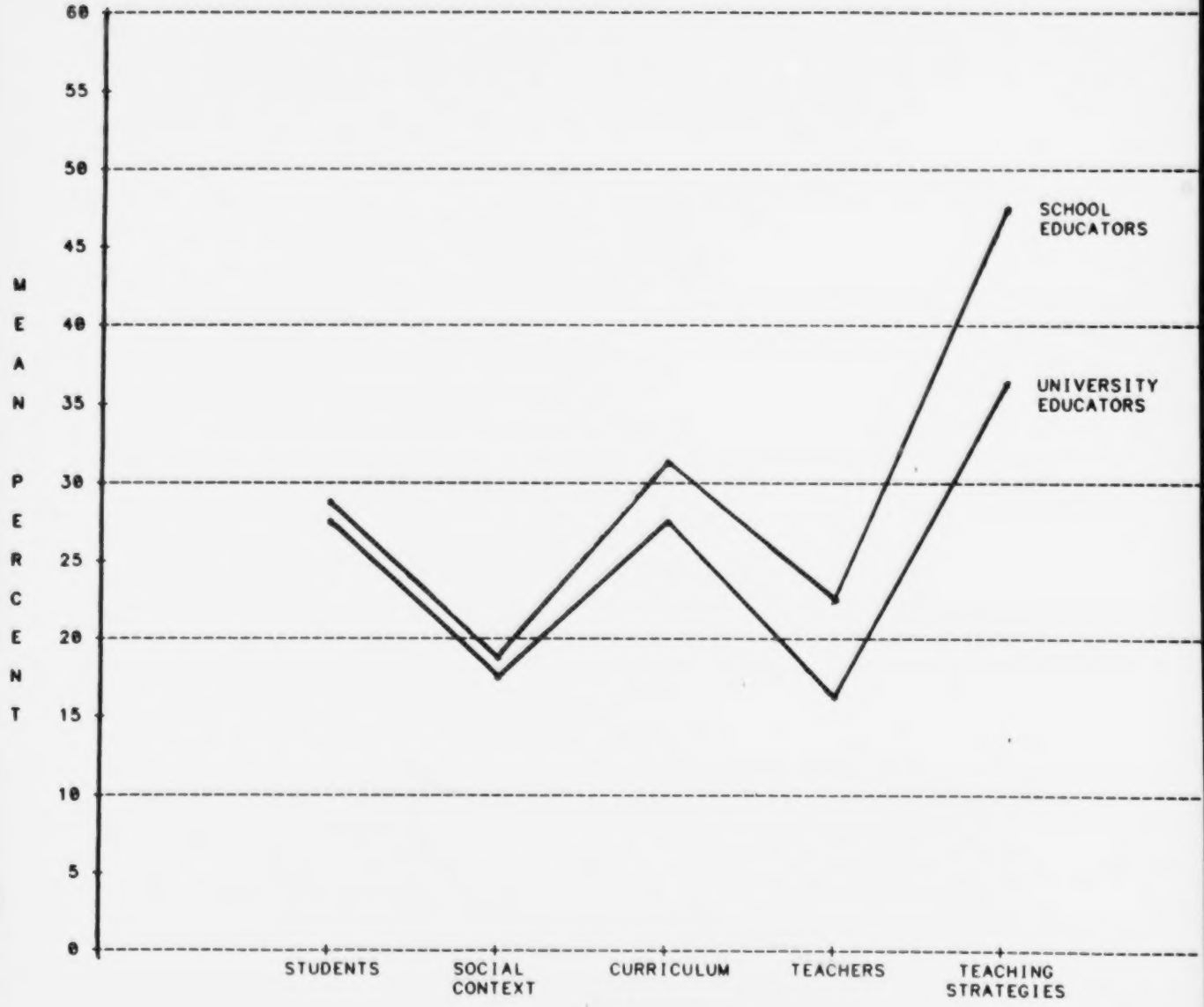

FIGURE 1
PROFILES OF CRUCIAL PROFESSIONAL KNOWLEDGE:
UNIVERSITY AND SCHOOL EDUCATORS

social context of schooling: legal/political interpretations of the role of schools (p=.056), multicultural dimensions of schooling (p=.017), and social organization of schools (p=.033). University educators rate 2 of 12 items more crucial in knowledge of curriculum: effective ways of deciding what to teach (p=.033) and federal, state, and local policies and guidelines of curriculum influence (p=.040). Regarding knowledge of teachers, university educators rate more crucial knowledge of the socialization process from preservice to career teacher (p=.052) and school educators rate more crucial knowledge for securing and maintaining teaching positions (p=.050). The patterns for the remaining 6 items were the same. Five of the twelve observed differences relate to knowledge of teaching strategies. School educators rate the following 5 of 15 teaching strategies items as more crucial knowledge than do university teacher educators: (1,2,3) establishing effective working relations with students of diverse backgrounds (p=.051), students with special needs (p=.016), and other teachers and administrators (p=.047); (4) integrating subject matter areas (p=.026); and (5) motivating reluctant learners (p=.007). Thus, university educators emphasize the more theoretical and/or general knowledge which underlies the framework of teacher decision-making and school educators emphasize knowledge which relates more directly to immediate and daily teacher decision-making.

Of the reflective teacher items, university educators rate as more crucial than school educators only one item: "ways of examining critically the process of one's own socialization from preservice to career teacher" (p=.052). The two groups of teacher educators are similar in their ratings of the reflective-oriented items relating to teaching strategies, curriculum decisions, and examination of educational issues.

In summary, the profile analysis of knowledge objectives considered as crucial for preservice elementary education candidates suggests there are statistically significant differences in the pattern of responses to the five pedagogical topics representative of professional knowledge. The profiles are not parallel in that school educators consider knowledge of teaching strategies and teachers as more crucial whereas university educators consider knowledge of students, social context of schooling and curriculum as slightly more crucial.

Collaborative Objectives for Generic Professional Knowledge

Several measures were used to identify the collaborative generic objectives. If 50% percent or more of the university educators rated a knowledge statement as crucial or very important and school educators did likewise, the statement is classified as a collaborative objective. Table 1, Collaborative Generic Professional Knowledge Objectives, also reports those statements rated as crucial or very important by 60% or more and by 70% or more of both educator groups. In addition, the discrepancy measure indicates those statements which represent differences between the two groups in preservice teacher expectations. Finally, the statements rated as not important for preservice teacher knowledge objectives are summarized.

Of the 60 knowledge statements, 36 statements are collaborative objectives, 10 items are discrepancy statements, and 14 statements are not important as preservice teacher objectives. Depending upon the criterion used, one may consider 15 statements as collaborative objectives (70% measure), 25 statements as collaborative objectives (60% measure), or all 36 statements as collaborative knowledge objectives (50% measure). Because of the relatively large number of collaborative knowledge objectives, we will use the 60% measure for discussion.

Of the 25 collaborative professional knowledge objectives (60% measure), 3 statements relate to students, 2 relate to social context of schooling, 5 relate to curriculum, 2 relate to teachers, and 13 relate to teaching strategies. Preservice teachers should have a substantial knowledge of principles of learning (70% agreement), language development and personality development. The practical aspects of schooling are important: knowledge of characteristics of effective classrooms (70% agreement) and effective grouping procedures. Preservice teachers should know for curriculum development the inherent structure and knowledge in the discipline(s) to be taught as school subjects

INSERT TABLE 1
ABOUT HERE

(70% agreement), ways to select, design and modify materials for exceptional students and ways to stay current in a subject area. Knowledge about teachers should focus on characteristics of effective teachers (70% agreement) and

TABLE 1

Collaborative Generic Professional Knowledge Objectives

Coded as: *** - 70% or more of both university and school educators rated as crucial or very important

** - 60% or more of both university and school educators rated as crucial or very important

* - 50% or more of both university and school educators rated as crucial or very important

S - students, SC = social context of schooling, C = curriculum, T = teachers, TS = teaching strategies

***	S	1.	Basic principles of learning (e.g., motivation, reinforcement)
**	S	2.	Language development
**	S	3.	Personality development (e.g., Loevinger)
*	S	4.	Cognitive development (e.g., Piaget's stages)
*	S	5.	Social development (e.g., Erickson)
*	S	6.	Perceptual - motor development
*	S	7.	Characteristics of exceptional children (e.g., gifted, physically handicapped)
*	S	8.	Guidelines for teaching specific types of learning outcomes (e.g., guidelines for teaching concepts)
*	S	9.	The effects of teaching practices on students (e.g., expectation theory)
***	S	10.	Characteristics of effective classrooms
**	S	11.	Effective ways of grouping students for instruction
*	S	12.	Characteristics of effective schools
***	C	13.	The content to be taught
***	C	14.	Inherent structure/basic nature of the discipline(s) to be taught as school subjects
**	C	15.	Ways in which knowledge is developed and tested in the discipline(s) to be taught as subjects
**	C	16.	Ways to select, design or modify curriculum materials to meet the needs of exceptional students
**	C	17.	Ways to stay current in a subject area
*	C	18.	Ways in which one comes to know a subject matter
*	C	19.	Effective ways of deciding what to teach
***	C	20.	Characteristics of effective teachers

*** T 21. Effective approaches to teacher decision making

* T 22. Professional ethics

*** TS 23. Maximizing student understanding of subject matter

*** TS 24. Establishing effective working relations with students who come from dirverse backgrounds (e.g., different social classes, races, or cultures)

*** TS 25. Establishing effective working relations with students who have special needs (e.g., serious leraning problems, visually impaired)

*** TS 26. Implementing classroom management techniques

*** TS 27. Providing instruction that addresses individual needs and achievements

*** TS 28. Designing lessons, units, and courses of study

*** TS 29. Establishing a classroom environment in which students actively take responsibility for themselves and for others in the group

*** TS 30. Motivating reluctant learners

*** TS 31. Maintaining active student participation in classroom tasks

*** TS 32. Identifying the relative strengths and shortcomings of one's own classroom performance

*** TS 33. Ways of examining one's own assumptions and biases about instruction and how these affect one's teaching strategies

** TS 34. Integrating subject matter areas

** TS 35. Apply effective methods of teaching specific subjects such as reading and mathematics

* TS 36. Establishing effective working relations with other teachers and school administrators

approaches to teacher decision-making. The 13 objectives relating to teaching strategies, of which 9 are very important to 70% or more of both groups, include techniques to maximize student understanding, working with students of diverse backgrounds and special needs, motivating students in learning and participation, designing courses of study, self-evaluation of one's own classroom performance, and ways to examine one's own biases about instruction.

If one uses for decision-making the 50% measure, then 9 more statements in five different pedagogical topics could serve as collaborative objectives. Fifty to 59% of both educator groups rated an additional 6 statements about students, 1 statement on the schooling context, 2 statements about curriculum, 1 statement about teachers, and 1 statement on teaching strategies as crucial knowledge. The statements relating to knowledge about students provide general knowledge and theories about cognitive, social, and perceptual-motor development, expectation theories, and characteristics of exceptional children. The remaining statements include diverse areas of knowledge such as the ways in which one comes to know a subject, ways to decide what to teach, professional ethics, etc. In general, these statements tend to provide ways of perceiving students or knowledge development.

Each educator group views 5 different statements as important objectives but less than 50% of the other educator group agrees, i.e., there is a discrepancy on the knowledge statement. Because both groups do not agree on the same relative importance of the statement, these are not classified as collaborative objectives. However, these 10 statements express desirable preservice teacher knowledge outcomes by one group of educators. University educators rate as more important than do school educators knowledge about moral development, multi-cultural dimensions of schooling, ways of critically examining educational issues and their relationship to practice, and ways of examining one's own rationale for major curriculum decisions and their implications for schooling and society. School educators rate as more important than do university educators knowledge about assessment instruments/procedures, collection and interpretation of information regarding student needs and achievement, existing curriculum projects, developmental sequences (grade level) of content in the school curriculum, and designing and using media techniques. The discrepancy seems to be one of general knowledge and reflective teacher thinking skills (university educators) versus

particularistic knowledge about students and curriculum (school educators).

Both groups of educators agree that 14 statements are not important knowledge for preservice teachers. Seven statements relate to the social context of schooling: history of American education, philosophy of education, legal/political/economic interpretations of the role of schools, the influence of communities on schools and vice-versa, and contemporary educational issues. Two curriculum topics not important for preservice candidates are federal, state and local sources of curriculum influence and ways to evaluate curriculum materials. The remaining five statements considered unimportant are those relating to the development of a career teacher. The study does not address whether this knowledge is crucial in the later development of a professional teacher

Discussion

In conclusion, the profiles of crucial professional knowledge objectives of the two groups of teacher educators differ significantly ($p=.055$). University educators consider knowledge about students, the social context of schooling and curriculum as crucial slightly more than do school educators. School educators consider knowledge about teachers and especially about teaching strategies as crucial more than do university educators. University educators emphasize more the theoretical and/or general knowledge which underlies the framework of teacher decision-making and school educators emphasize knowledge which relates more directly to immediate and daily teacher decision-making.

Depending upon the criterion used, both groups of teacher educators rate 15 statements (70% or more measure), 25 statements (60% or more measure), and 36 statements (50% or more measure) as crucial or very important knowledge objectives for preservice teachers. Both teacher educator groups rate highly knowledge of the content and the discipline taught as a school subject, learning principles, and effective approaches to teacher decision-making in curriculum development and teaching strategies which promote student academic achievement and rate less highly theoretical knowledge about student development. A discrepancy index suggests that university educators rate more often general knowledge and reflective teacher thinking skills as crucial objectives and school educators rate more often particularistic knowledge about students and curriculum resources as crucial objectives.

Both groups of teacher educators agree that 14 statements are not important professional knowledge objectives for preservice teachers. Seven statements relate to the social context of schooling, two statements relate to curriculum, and the remaining five statements relate to the development of a career teacher.

Thus, concensus exists between both groups of teacher educators on the importance of applied knowledge. In addition, university educators would emphasize general or theoretical knowledge and school educators would emphasize practical (particularistic) knowledge.

Although many of the preservice pedagogical topics investigated in this study are similar to other teacher education programs, the findings are limited to the nonrandomized sample of participants and to the specific university teacher education program.

This study has implications for collaborative teacher education program development, program evaluation and further research. Collaborative teacher education programs can be a viable alternative to cooperative arrangements between schools and universities. The extensive collaborative professional knowledge objectives identified in this study, if implemented into programmatic activities, suggests the need for professional knowledge traditionally associated with each organization. Most teacher education programs are structured for university-based theories with simulated practice and specific applications of general knowledge in school-based realities. Without both types of professional knowledge, the preservice teacher candidate lacks the opportunity to integrate educational theories and practices and to develop informed decision-making under supervision. Unless both school and university educators value generic professional knowledge, undergirded by general education theories and particularized by daily decision alternatives in classrooms, both groups of teacher educators may miss opportunities to fully use their areas of expertise and resources in planning for sequential preservice teacher education experiences (Schumacher & Rommel-Esham, 1986).

The agreement on generic professional knowledge objectives to be implemented by both school and university teacher educators is important in the evaluation of a collaborative teacher education program. Developing evaluation designs in such a program is also a collaborative process (Schumacher, 1985). Both school and university teacher educators were involved in formulating the

evaluation designs, data collection activities, reviewing drafts of formal reports and dissemination. Although formative evaluation designs are not limited to a prior objectives, the process of identifying collaborative objectives is important for program development and evaluation. The participation of both groups of teacher educators in formal objective-setting seemed to make conscious the role and expertise of each group in the professional knowledge acquisition of preservice teachers.

This study focused on preservice elementary teacher knowledge objectives. Additional research is necessary to determine preservice professional knowledge objectives in other teacher education programs such as secondary education, special education, etc. Both school and university educators could agree on distinctions between the professional knowledge essential for a preservice teacher and that which was not. Apparently other additional knowledge is crucial in the subsequent development of a professional teacher. Various models have been suggested for teacher development (Davis & Zaret,1984; Brandt, 1985), and research has been conducted which identifies changes in teacher attitudes and behaviors, including concerns, cognitions, and perspectives. Most studies are short term cross-sectional or longitudinal encompassing five years at the most in the development of a teacher. These studies have been conducted from three frameworks: developmental stages of concerns, cognitive development, and teacher socialization (Veenman, 1984). As teacher induction programs, fifth year teacher education programs, lead teacher arrangements, and master teacher recognition are developed and institutionalized, it may be possible to determine the generic professional knowledge essential in the development of a career teacher.

Notes

1. This project won the 1986 AACTE Distinguished Achievement Award for Innovation in Content and Curriculum of the Teacher Education Program. The three year project was funded by Virginia Department of Education Research and Program Development Service, Richmond City Public Schools, and Virginia Commonwealth University.

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